

## ***HANTAVIRUS PULMONARY SYNDROME***

### **I. IDENTIFICATION**

- A. **CLINICAL DESCRIPTION:** Hantavirus pulmonary syndrome (HPS), commonly referred to as hantavirus disease, is a febrile illness characterized by bilateral interstitial pulmonary infiltrates and respiratory compromise usually requiring supplemental oxygen and clinically resembling acute respiratory disease syndrome (ARDS). The typical prodrome consists of fever, chills, myalgia, headache, and gastrointestinal symptoms. Typical clinical laboratory findings include hemoconcentration, left shift in the white blood cell count, neutrophilic leukocytosis, thrombocytopenia, and circulating immunoblasts.
- B. **CLINICAL CASE DEFINITION:** An illness characterized by one or more of the following clinical features:
- A febrile illness (i.e., temperature >101.0 F [>38.3 C]) characterized by bilateral diffuse interstitial edema that may radiographically resemble ARDS, with respiratory compromise requiring supplemental oxygen, developing within 72 hours of hospitalization, and occurring in a previously healthy person.
  - An unexplained respiratory illness resulting in death, with an autopsy examination demonstrating noncardiogenic pulmonary edema without an identifiable cause.
- C. **REPORTING CRITERIA:** Laboratory confirmation.
- D. **LABORATORY CRITERIA FOR CONFIRMATION:**
- Detection of hantavirus-specific immunoglobulin M or rising titers of hantavirus specific immunoglobulin G, or
  - Detection of hantavirus-specific ribonucleic acid sequence by polymerase chain reaction in clinical specimens, or
  - Detection of hantavirus antigen by immunohistochemistry
- E. **KENTUCKY CASE DEFINITION:** A clinically compatible case that is laboratory confirmed.

### **II. ACTIONS REQUIRED / PREVENTION MEASURES**

- A. **KENTUCKY DISEASE SURVEILLANCE REQUIRES URGENT NOTIFICATION:** REPORT TO THE LOCAL OR STATE HEALTH DEPARTMENT **IMMEDIATELY** upon recognition of a case or a suspected case in a time period not greater than 24 hours. If health department personnel cannot be contacted directly, notification shall be made by electronic submission or by telephone to the emergency number of the Division of Epidemiology and Health Planning, **1-888-973-7678**.

**B. EPIDEMIOLOGY REPORTS REQUESTED:**

1. Kentucky Reportable Disease Form – EPID 200 (Rev. Jan/03).

**C. PUBLIC HEALTH INTERVENTIONS:**

- Investigation to find source of exposure and other persons possibly exposed by the LHD and the EPI Rapid Response Team; Exterminate rodents in and around the household if feasible.
- Education by the LHD of the risk-reduction measures recommended by the CDC: MMWR: June 25, 1999 / 48(24);521-525.

**III. CONTACTS FOR CONSULTATION**

**A. KENTUCKY DEPARTMENT FOR PUBLIC HEALTH, SURVEILLANCE AND HEALTH DATA BRANCH: 502-564-3418.**

**B. KENTUCKY DEPARTMENT FOR PUBLIC HEALTH, COMMUNICABLE DISEASE BRANCH: 502-564-3261.**

**III. RELATED REFERENCES**

1. Chin, James, ed. HANTAVIRUS PULMONARY SYNDROME. In Control of Communicable Diseases Manual. 17<sup>th</sup> ed. Washington, DC: American Public Health Association, 2000: 234-236.
2. CDC. Update: Hantavirus Pulmonary Syndrome—United States, 1999. MMWR 1999; 48(24);521-525.
3. Pickering, LK, ed. Hantavirus Cardiopulmonary Syndrome. In: 2000 Red Book: Report of the Committee on Infectious Diseases. 25<sup>th</sup> ed. Elk Grove Village, IL: American Academy of Pediatrics, 2000: 272-274.